



**The Commonwealth of Massachusetts**

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**DEPARTMENT OF  
TELECOMMUNICATIONS AND ENERGY**

November 1, 2005

D.T.E. 05-6

Petition of Assabet Water Company, Inc., pursuant to G.L. c. 165, § 4, for approval by the Department of Telecommunications and Energy for the expansion of its franchise area established in D.P.U. 17524 (February 28, 1973).

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APPEARANCES:

Robert F. Dore, Jr., Esq.  
Fletcher, Tilton & Whipple, P.C.  
The Guaranty Building, 370 Main Street - 12<sup>th</sup> Floor  
Worcester, Massachusetts 01608-1779  
FOR: ASSABET WATER COMPANY  
Petitioner

## I. INTRODUCTION

On February 8, 2005, Assabet Water Company (“Assabet” or “Company”), filed a petition (“Petition”) with the Department of Telecommunications and Energy (“Department”) for approval of the expansion of its franchise area established in Assabet Water Company, D.P.U. 17524 (1973). The Company requests that the Department approve an expansion of its franchise area by removing a restriction imposed in D.P.U. 17524 that permits the Company only to provide a public water supply to a residential development and golf course in Stow, Massachusetts, known as Harvard Acres (Petition at 2, citing D.P.U. 17524, at 5-6).

On May 4, 2005, Department staff conducted a site visit of the Company’s facilities and the surrounding franchise area. On May 12, 2005, pursuant to notice duly issued, the Department conducted a public hearing to afford interested persons the opportunity to comment on the Company’s Petition. There were no members of the public who wished to be heard at the hearing. Immediately following the public hearing, the Department held an evidentiary hearing. The Company presented the testimony of Robert E. Maynard, Jr., president of Assabet Water Company and Stephen B. Alcott, consultant. The evidentiary record consists of 15 exhibits and responses to five record requests.<sup>1</sup>

## II. BACKGROUND

Assabet is a public water supply company located in the Town of Stow, Massachusetts presently serving 186 residential customer accounts in the Harvard Acres subdivision and one

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<sup>1</sup> The Department incorporates by reference the Company’s annual returns to the Department for the years 2001 through 2004. 220 C.M.R. § 1.10(3).

golf course. The Company has an average system demand of approximately 60,000 gallons per day (“GPD”) (Exhs. Alcott-1, at 7-8; DTE 1-2; DTE 1-4). Assabet has been owned by WhiteWater, Inc. (“WhiteWater”) since December 1, 1999 (RR-DTE-4, at 1).<sup>2</sup>

Assabet’s existing source of water supply is two wells, each with an effective yield of approximately 65 gallons per minute (“GPM”) or 93,600 GPD (Exhs. Alcott-1, at 8; DTE 1-2; Tr. at 25-26). On February 5, 2001, the Massachusetts Department of Environmental Protection (“DEP”) determined that Well No. 1 was under the direct influence of surface water<sup>3</sup> and, therefore, required filtration (RR-DTE-5, at 7).<sup>4</sup> Consequently, Well No. 1 was taken off-line and is available only as a backup supply until treatment facilities are installed (Exh. Alcott-1, at 8; RR-DTE-5, at 7).

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<sup>2</sup> WhiteWater operates approximately 340 water and/or wastewater systems in Massachusetts on a contract basis. These systems range from wells that serve a single restaurant, condominium complex, or strip mall to much larger systems including the City of Chelsea, the Town of Southbridge, Whitinsville Water Company, and Manchaug Water Supply District (Exh. AWC-1, at 9; Tr. at 41-44).

<sup>3</sup> Ground water “under the direct influence of surface water” refers to any subsurface water subject to (1) significant and rapid shifts in water characteristics such as turbidity, temperature, conductivity, pH levels which closely correlate to climatological or surface water conditions, or (2) significant occurrence of macroorganisms, algae, or large-diameter pathogens. 310 C.M.R. § 22.02.

<sup>4</sup> In addition to surface water issues, Well No. 1 has elevated concentrations of iron and manganese and Well No. 2 has elevated concentrations of manganese (RR-DTE-5, at 7). The prevalence of iron and manganese in the area’s water sources necessitates filtration for both Well No. 1 and Well No. 2 (Tr. at 22-23). Although the Company currently treats for iron and manganese with an orthophosphate solution, filtration is a more effective treatment for these minerals (id.; Tr. at 23).

Although Well No. 2 is sufficient to meet the Company's average system demand of 60,000 GPD, the well is unable to produce enough water to meet peak summer demands that can reach approximately 115,200 GPD (Tr. at 16, 25-26; RR-DTE-5, at 7). As a result, it has been necessary for Assabet to institute water use restrictions during peak summer demand (Tr. at 25-26; RR-DTE-2). In addition, DEP's most recent comprehensive compliance evaluation ("CCE") of the Company has identified a number of violations and deficiencies requiring corrective action (RR-DTE-5).<sup>5</sup>

## II. COMPANY POSITION

Assabet recognizes that, although the quality of its water is currently satisfactory, the quantity of water is not sufficient to meet certain peak demands such as summer irrigation (Tr. at 16). Assabet also not satisfied with the present level of service and seeks to improve its water supply (id.). It is to that end that the Company seeks to have its present franchise restriction lifted (id. at 20-21).

The Company states that it reviewed a number of alternatives in order to improve the quality and quantity of its water supply, including the installation of a third well (Tr. at 16-17). Initial test drilling failed to locate a suitable well location that would provide sufficient water to

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<sup>5</sup> The CCE is a periodic review by DEP of a public water system's technical, financial, and managerial components. It is intended to ensure that the system meets current drinking water requirements and can meet future requirements for the production and distribution of safe drinking water (RR-DTE-5, at 1). The 2004 CCE for Assabet identified a number of areas that require corrective action, including structural improvements to its well houses, system pressure problems, and treatment system repairs (id. at 39-43). Assabet represents that it has been working with DEP in order to defer any DEP action regarding deficiencies in the system until the construction of a filtration plant, discussed further below (Tr. at 35-36).

meet system demand (id. at 17; RR-DTE-5, at 7). Moreover, Assabet notes that obtaining necessary DEP approval for a new source of supply would take at least three years and entail significant expense (Tr. at 17-18). Given the presence of iron and manganese in the area, the Company believes that any new supply would require treatment regardless of the source (id. at 22-23).

Based on the quantity and quality problems of the existing water supply and the physical and administrative costs associated with developing a third well, the Company concluded that construction of a filtration plant was an appropriate long-term solution (id. at 23). Assabet met with its customers several years ago to discuss supply and treatment options and reports that customers were overwhelmingly in favor of constructing a filtration plant designed to address all current and reasonably anticipated future DEP standards (id. at 18-19). At that time, the cost of construction was estimated to be approximately \$500,000 (id. at 10, 20).<sup>6</sup>

The Company began preliminary design work for the filtration plant during 2001 (RR-DTE-4 (2001 Report on Water Quality)). DEP granted final approval of the construction of the filtration plant on August 20, 2004 (RR-DTE-1, (DEP letter dated August 20, 2004)).<sup>7</sup>

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<sup>6</sup> Assabet states that it made a commitment to its customers that it would limit any rate increase associated with the filtration plant to a doubling of current rates (id. at 18, 56-57). Under the Company's present tariff, a typical residential customer using 75,000 gallons per year pays an annual rate of \$511. Assabet Water Company, M.D.P.U. No. 4, Original Sheet No. 7.

<sup>7</sup> While DEP originally approved the construction of the treatment plant on August 2, 2002, this approval was based on an understanding that conventional  
(continued...)

Approval of the Stow Conservation Commission was also required and obtained in early 2005 (Tr. at 19-20). During the term of the permitting process, the estimated cost of the filtration plant rose significantly. While the Company redesigned the filtration plant to reduce construction costs, the revised cost estimate of \$600,000 is approximately \$100,000 greater than the original estimate (id. at 10, 20).

In view of the cost escalation, the Company is in the process of conducting a revised analysis to determine whether the construction of a filtration plant will be a cost-effective solution to the Company's water situation (id.). In order for the construction of the filtration plant to be cost-effective for existing customers, the Company determined that it would be necessary to increase its customer base (id. at 22). As a result, Assabet concluded that elimination of the franchise restriction was an essential step toward solving its water supply needs (id. at 57).

In addition to allowing the costs of the construction of the filtration plant to be spread over a larger customer base, Assabet asserts that lifting the franchise restriction will facilitate the development of a comprehensive approach to water supply planning in the Stow area (Exh.

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<sup>7</sup> (...continued)  
treatment technologies would be used (Tr. at 19). Instead, Assabet intended to install a filtration system using membrane technology, a technique that has not been used in Massachusetts (Tr. at 18, 29). Because membrane technology has not been used in Massachusetts, DEP required additional information on the proposed treatment method before granting final approval in August 2004 (Tr. at 19; RR-DTE-1, (DEP letter dated August 20, 2004)).

Alcott-1, at 10; Tr. at 53-57).<sup>8</sup> The Company identified a number of existing or proposed developments that could be served through direct interconnections with Assabet's existing system, as well as noncontiguous areas that could be served by Assabet using on-site sources of supply that either currently exist or that would be developed in conjunction with new construction (Exhs. Alcott-1, at 5-6; SBA-4; DTE 1-1; Tr. at 31). For example, the Company identified Derby Woods, a 30-home residential development being constructed adjacent to the Company's distribution system, as a potential contiguous source of customer growth (Exh. DTE 1-2).<sup>9</sup> According to the Company, the addition of Derby Woods could provide Assabet with a sufficient customer base to make the filtration plant cost-effective, while preserving the Company's commitment to customers that average water rates would not exceed approximately \$1,000 per year, or double the amount of existing rates (Tr. at 56-57).<sup>10</sup>

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<sup>8</sup> Presently, approximately 80 percent of the population of Stow is served by individual wells (Exh. Alcott-1, at 7). Assabet serves approximately 560 customers and five other small nonregulated systems serve a similar number of residents in rest homes, condominiums or apartment complexes (Exhs. Alcott-1, at 7; SBA-1). Of the seven towns surrounding Stow, the Towns of Bolton and Boxborough have no central water systems, the Town of Harvard serves less than 20 percent of its population, and the Acton water supply district serves approximately 80 percent of the Town of Acton's population (Exh. Alcott-1, at 7).

<sup>9</sup> Other potential customers contiguous to Harvard Acres include the BOSE Company, the Minute Man Field, and several residential developments (Exh. DTE 1-1). In addition, the Company identified the Lower Village area of Stow as a potential non-contiguous area that could be served on a satellite basis (*id.*). While Assabet contemplates serving these customers as separate systems, the Company believes it possible for at least some of these new areas to be interconnected over time (Tr. at 31).

<sup>10</sup> The Company asserts that it can meet the needs of Derby Woods with its existing operating supply system (Exhs. Alcott-1, at 8-9; DTE 1-3).

The Company asserts that, because of economies of scale, these contiguous and non-contiguous developments would be best served as part of a centralized water system (Tr. at 53-56). Assabet maintains that combining small systems offers a number of benefits to customers and ratepayers by providing water service more efficiently and effectively (Exh. Alcott-1, at 10). The Company asserts that these potential opportunities cannot be realized without a lifting of the franchise restriction (id. at 9-10).

### III. ANALYSIS AND FINDINGS

Assabet's franchise restriction was imposed at the request of the initial developers of Harvard Acres as part of an overall business plan that emphasized the construction and sale of homes and not the operation of a water system (Exh. DTE 1-1, at 4).<sup>11</sup> At the time the Department approved the Company's request for a franchise restriction, we noted that Assabet's system was designed to provide service only to the Harvard Acres section of Stow and found that expansion beyond such limits could adversely affect its customers, thereby resulting in an inability to provide adequate service at a reasonable cost. D.P.U. 17524, at 4. The Company contends that lifting the franchise restriction is now appropriate because it will allow Assabet to develop a more efficient system, thus improving both the water quality and quantity issues faced by its current customers (Petition at 2; Tr. at 54-55).

Where the Department has authorized the subsequent expansion of a water company's distribution service area, we have considered the design characteristics of the water system in

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<sup>11</sup> Assabet is presently the only Department-regulated water system that has an express geographic franchise restriction.



determining whether such an expansion would adversely affect existing customers and result in an inability to provide adequate service at reasonable rates. Pequot Water Company, D.P.U. 896, at 6 (1981). Assabet's active Well No. 2 has a safe yield of between 100,000 and 108,000 GPD (Exhs. Alcott-1, at 8; DTE 1-2; DTE 1-4). While Well No. 2 is sufficient to meet the normal average demand of 60,000 GPD for Harvard Acres, the Company's water supply is constrained during periods of peak seasonal and hourly demands (Tr. at 25-26, 32, 37; RR-DTE-5, at 7; RR-DTE-2).

In order to provide reliable year-round service to Assabet's current customers, Well No. 1 must be placed back into operation or another suitable source of supply must be found. The proposed filtration plant will allow the Company to place Well No. 1 back into service, thereby providing sufficient water to meet present and anticipated demand in Harvard Acres.<sup>12</sup> In addition, with Well No. 1 in service, the Company will have multiple sources of supply available on a regular basis. However, construction of a \$600,000 filtration plant is not cost effective for Assabet's small existing customer base (Tr. at 22).

Lifting the franchise restriction and a subsequent expansion of Assabet's customer base will permit the Company to construct and operate the proposed filtration plant at a lower per-customer cost (RR-DTE-5, at 7; Tr. at 20-21). The combined availability and output of Well Nos. 1 and 2 will, in turn, provide Assabet with additional opportunities to further increase its customer base and revenues. As a result, operational costs would be absorbed by a

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<sup>12</sup> The Department makes no findings here regarding prudence or the ratemaking treatment to be accorded to the filtration plant. In the event a filtration plant is built, these issues will be addressed as part of the Company's next general rate proceeding.

larger customer base and Assabet will have the opportunity to interconnect with other supply sources for increased reliability (Tr. at 40, 48-51).

If the restriction is lifted, the Company intends to serve its expanded service area through a combination of the acquisition of satellite operations serving noncontiguous areas and direct interconnections with its existing system (Exhs. Alcott-1, at 9-10; SBA-4; DTE 1-1; Tr. at 31). To the extent that new customers will be supplied through satellite operations, the satellite operations are either presently supplied through their own water sources or would be supplied with new sources to be developed by Assabet on location (Exhs. Alcott-1, at 5-6; DTE 1-3; DTE 1-6). As a result, these additional noncontiguous customers would not rely on Assabet's present sources of supply.<sup>13</sup> Therefore, we find that lifting the franchise restriction to allow the Company to serve noncontiguous areas would not adversely affect the ability of Assabet to supply its current customer base.

In the case of extending service to customers who would be reliant upon Assabet's present source of supply from Well No. 2 (in contrast with areas with an existing source of supply that could be directly interconnected with Assabet's system), we find that the existing customer base could be adversely affected by a lifting of the franchise restriction (Tr. at 16, 25-26; RR-DTE-5). Until a new source of supply is brought online, the addition of such customers could further strain the capacity of Well No. 2.

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<sup>13</sup> Assabet's affiliation with WhiteWater provides the Company with access to the capital and technical expertise and management necessary to operate such an expanded water system (Exh. Alcott-1, at 9-10; Tr. at 41-44).

The Company's success in placing a second source of supply on line at Harvard Acres, whether through the construction of a filtration plant or by other means, is of critical importance in resolving the water service issues experienced by current ratepayers. The Department finds that a conditional approval of Assabet's petition will allow the Company to pursue a cost-effective solution to bring a second source of supply online while, at the same time, assure that Assabet's existing customers are not adversely affected by any service territory expansion. Therefore, we grant the Company's petition on the condition that Assabet is not permitted to offer service to any new customers outside the previously established geographic franchise who would need to be supplied from Assabet's existing Well No. 2 until such time as either (1) Well No. 1 has been lawfully placed back into service after construction of a filtration plant, or (2) a second source of supply is otherwise in place, sufficient to serve the peak demand of the current customers in Harvard Acres. Assabet may, however, interconnect with any systems provided that those systems have their own adequate sources of supply.

As a precondition to offering service to new customers, the Company must file with the Department, under affidavit by a corporate officer competent under the Company's bylaws to make such representations, that either of these two stated conditions has been satisfied, that offering service to new customers will not impair service to existing customers, and that the surface-water-influence issues raised by DEP on February 5, 2001 are resolved. A subsequent order by the Department responding to this filing will be required to determine that the condition has been satisfied and that restrictions on customer-base expansion may be lifted.

IV. ORDER

Accordingly, after notice, hearing and consideration, it is

ORDERED: That the petition of Assabet Water Company to expand its franchise area established in Assabet Water Company, D.P.U. 17524 (1973) is GRANTED on the condition that Assabet Water Company is not permitted to offer services to any new customers outside the previously established geographic franchise who would need to be supplied from Well No. 2 until such time as either (1) Well No. 1 has been lawfully placed back into service after construction of a filtration plant, or (2) a second source of supply is otherwise in place, sufficient to serve the peak demand of the current customers in Harvard Acres. Assabet may, however, interconnect with any systems provided that those systems have their own adequate sources of supply; and it is

FURTHER ORDERED: That Assabet Water Company shall comply with all other directives contained in this Order.

By Order of the Department,

\_\_\_\_\_/s/\_\_\_\_\_  
Paul G. Afonso, Chairman

\_\_\_\_\_/s/\_\_\_\_\_  
James Connelly, Commissioner

\_\_\_\_\_/s/\_\_\_\_\_  
W. Robert Keating, Commissioner

\_\_\_\_\_/s/\_\_\_\_\_  
Judith F. Judson, Commissioner

\_\_\_\_\_/s/\_\_\_\_\_  
Brian Paul Golden, Commissioner

An appeal as to matters of law from any final decision, order or ruling of the Commission may be taken to the Supreme Judicial Court by an aggrieved party in interest by the filing of a written petition praying that the Order of the Commission be modified or set aside in whole or in part. Such petition for appeal shall be filed with the Secretary of the Commission within 20 days after the date of service of the decision, order or ruling of the Commission, or within such further time as the Commission may allow upon request filed prior to the expiration of 20 days after the date of service of said decision, order or ruling. Within ten days after such petition has been filed, the appealing party shall enter the appeal in the Supreme Judicial Court sitting in Suffolk County by filing a copy thereof with the Clerk of said Court. G.L. c. 25, § 5.